

Safety Data Sheet

MAPEFLOOR PU 400 LV/ B- vedi note

Safety Data Sheet dated 2/8/2018, version 2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: MAPEFLOOR PU 400 LV/ B- vedi note

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use:

Hardener for polyurethane-based adhesives.

Uses advised against:

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1.3. Details of the supplier of the safety data sheet

Supplier:

MAPEI U.K. Ltd - Mapei House Steel Park Road

Halesowen - West Midlands B62 8HD

phone: +44(0)121 508 6970

fax: +44(0)121 5086 960

www.mapei.co.uk (office hour 7:00 am - 7:00 pm)

Competent person responsible for the safety data sheet:

sicurezza@mapei.it

1.4. Emergency telephone number

For medical emergencies call NHS 111 (where available) or your local doctor/ hospital. If you require advice outside of Mapei (UK) office hours (7am – 7pm) on any environmental issues, please contact OHES Environmental Ltd +44 (0) 1684 299 886

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

- ⚠ Warning, Acute Tox. 4, Harmful if inhaled.
- ⚠ Warning, Eye Irrit. 2, Causes serious eye irritation.
- ⚠ Danger, Resp. Sens. 1, May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- ⚠ Warning, Skin Sens. 1, May cause an allergic skin reaction.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:

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Danger

Hazard Statements:

H332 Harmful if inhaled.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

Precautionary Statements:

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...

Special Provisions:

None

Contains

2,4-Diisocyanatotoluene-polypropylene glycol copolymer

4-methyl-m-phenylene diisocyanate

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

>= 75% 2,4-Diisocyanatotoluene-polypropylene glycol copolymer

CAS: 37273-56-6

⚠ 3.3/2 Eye Irrit. 2 H319

⚠ 3.4.2/1 Skin Sens. 1 H317

>= 0.25% - < 0.49% 4-methyl-m-phenylene diisocyanate

REACH No.: 01-2119486974-18-XXXX, Index number: 615-006-00-4, CAS: 584-84-9, EC: 209-544-5

⚠ 3.6/2 Carc. 2 H351

⚠ 3.3/2 Eye Irrit. 2 H319

⚠ 3.8/3 STOT SE 3 H335

⚠ 3.2/2 Skin Irrit. 2 H315

⚠ 3.4.1/1 Resp. Sens. 1 H334

⚠ 3.4.2/1 Skin Sens. 1 H317

4.1/C3 Aquatic Chronic 3 H412

⚠ 3.1/1/Inhal Acute Tox. 1 H330

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SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do NOT induce vomiting.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

4.2. Most important symptoms and effects, both acute and delayed

The product is harmful following acute exposure to it and poses a serious health threat if inhaled.

If brought into contact with the eyes, the product causes considerable irritation which can last for over 24 hours.

If inhaled, the product may cause sensitisation of the airways, and if brought into contact with the skin it may cause sensitisation of the skin.

4.3. Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

(see paragraph 4.1)

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

CO2 or Dry chemical fire extinguisher.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

The original ingredients or unidentified toxic and/or irritant compounds may be present in the combustion fumes.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

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Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Limit leakages with earth or sand.

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Rapidly recover the product, wearing protective clothing.

After the product has been recovered, rinse the area and materials involved with water.

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

Retain contaminated washing water and dispose it.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers. (see point 10.5)

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

4-methyl-m-phenylene diisocyanate - CAS: 584-84-9

NDS - TWA: 0.007 mg/m³

NDSch - TWA: 0.021 mg/m³

ACGIH - TWA(8h): 0.001 ppm - STEL: 0.005 ppm - Notes: (IFV), Skin, DSEN, RSEN, A3

- Asthma, pulm func, eye irr

DNEL Exposure Limit Values

4-methyl-m-phenylene diisocyanate - CAS: 584-84-9

Worker Industry: 0.14 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Industry: 0.14 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Industry: 0.035 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term,

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systemic effects

Worker Industry: 0.035 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

PNEC Exposure Limit Values

4-methyl-m-phenylene diisocyanate - CAS: 584-84-9

Target: Fresh Water - Value: 0.013 mg/l

Target: Marine water - Value: 0.00125 mg/l

Target: Soil (agricultural) - Value: 1 mg/kg - Type of hazard: >

Target: Microorganisms in sewage treatments - Value: 1 mg/l - Type of hazard: >

8.2. Exposure controls

Eye protection:

Safety goggles.

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Neoprene gloves are suggested (0,5 mm) not recommended gloves: not waterproof gloves

Suitable materials for safety gloves; EN 374:

Polychloroprene - CR: thickness $\geq 0,5$ mm; breakthrough time ≥ 480 min.

Nitrile rubber - NBR: thickness $\geq 0,35$ mm; breakthrough time ≥ 480 min.

Butyl rubber - IIR: thickness $\geq 0,5$ mm; breakthrough time ≥ 480 min.

Fluorinated rubber - FKM: thickness $\geq 0,4$ mm; breakthrough time ≥ 480 min.

Respiratory protection:

Use adequate protective respiratory equipment.

In case of insufficient ventilation use mask with ABEKP filters (EN 14387).).

Personal Protective Equipment should comply with relevant CE standards (as EN 374 for gloves and EN 166 for goggles), correctly maintained and stored. Consult the supplier to check the suitability of equipment against specific chemicals and for user information.

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	liquid
Colour:	yellow
Odour:	typical
Odour threshold:	N.A.
pH:	n.a.
Melting point / freezing point:	N.A.
Initial boiling point and boiling range:	Not determined
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	N.A.
Vapour density:	Not determined
Flash point:	ca.190 °C
Evaporation rate:	Not determined
Vapour pressure:	< 0.00001 kPa (23°C)

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Relative density:	1,05 g/cm ³ (23°C)
Vapour density (air=1):	Not determined
Solubility in water:	insoluble, reagisce
Solubility in oil:	partly soluble
Viscosity:	7000 mPa.s (23°C)
Auto-ignition temperature:	N.A. - No explosive or spontaneous ignition in contact with air at room temperature
Explosion limits(by volume):	N.A.
Decomposition temperature:	N.A.
Partition coefficient (n-octanol/water):	N.A. - This product is a mixture
Explosive properties:	N.A. - No components with explosive properties
Oxidizing properties:	N.A. - No component with oxidizing properties
9.2. Other information	
No additional information	

SECTION 10: Stability and reactivity

- 10.1. Reactivity
 - Stable under normal conditions
- 10.2. Chemical stability
 - Stable under normal conditions
- 10.3. Possibility of hazardous reactions
 - It may generate flammable gases on contact with elementary metals (alkalis and alkaline earth, alloys in powder or vapours) and powerful reducing agents.
 - It may generate toxic gases on contact with oxidising mineral acids, and powerful oxidising agents.
 - It may catch fire on contact with oxidising mineral acids, and powerful oxidising agents.
- 10.4. Conditions to avoid
 - Stable under normal conditions.
- 10.5. Incompatible materials
 - None in particular.
- 10.6. Hazardous decomposition products
 - None.
 - It releases carbon dioxide in contact with water
 - It polymerises on heating

SECTION 11: Toxicological information

- 11.1. Information on toxicological effects
 - Route(s) of entry:
 - Ingestion: Yes
 - Inhalation: Yes
 - Contact: No
- There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.
- The following tests refer to a mixture with a similar composition
- Toxicological information on main components of the mixture:
 - Toxicological information of the product: N.A.
- Toxicological information of the main substances found in the product:
 - 2,4-Diisocyanatotoluene-polypropylene glycol copolymer - CAS: 37273-56-6
 - a) acute toxicity:
 - Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg
 - Test: LC50 - Route: Inhalation - Species: Rat > 3.820 mg/l - Duration: 4h
 - 4-methyl-m-phenylene diisocyanate - CAS: 584-84-9
 - a) acute toxicity:

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- Test: LD50 - Route: Oral - Species: Rat = 5110 mg/kg - Notes: male
 Test: LD50 - Route: Oral - Species: Rat = 4130 mg/kg - Notes: female
 Test: LD50 - Route: Skin - Species: Rabbit > 9400 mg/kg
 Test: LC50 - Route: Inhalation Vapour - Species: Rat = 0.47 mg/l - Duration: 1h
 Test: LC50 - Route: Inhalation Vapour - Species: Rat = 0.107 mg/l - Duration: 4h
 d) respiratory or skin sensitisation:
 Test: Skin Sensitization - Route: Skin : Positive
 f) carcinogenicity:
 Test: Carcinogenicity - Route: Inhalation - Species: Rat = 0-0.15 Ppm - Notes: 2 y
 g) reproductive toxicity:
 Test: map1 - Route: Inhalation - Species: Rat 0.5 Ppm - Notes: 21 d

Corrosive/Irritating Properties:

Eye:

The product can cause irritation by contact

Cancerogenic Effects:

No effects are known.

Mutagenic Effects:

No effects are known.

Teratogenic Effects:

No effects are known.

Additional Information:

For this reason, the contact with the skin should be avoided. Once sensitization has occurred, exposures to small amounts of material may cause erythema and edema locally.

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:

- a) acute toxicity
- b) skin corrosion/irritation
- c) serious eye damage/irritation
- d) respiratory or skin sensitisation
- e) germ cell mutagenicity
- f) carcinogenicity
- g) reproductive toxicity
- h) STOT-single exposure
- i) STOT-repeated exposure
- j) aspiration hazard

SECTION 12: Ecological information

12.1. Toxicity

Adopt good industrial practices, so that the product is not released into the environment.

Biodegradability: no data available on the preparation.

2,4-Diisocyanatotoluene-polypropylene glycol copolymer - CAS: 37273-56-6

c) Bacteria toxicity:

Endpoint: EC50 > 10000 mg/l

4-methyl-m-phenylene diisocyanate - CAS: 584-84-9

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 12.5 mg/l - Duration h: 48

Endpoint: LC50 - Species: Fish = 133 mg/l - Duration h: 96

Endpoint: EC50 - Species: Algae = 4300 mg/l - Duration h: 96

Endpoint: EC50 - Species: Algae = 3230 mg/l - Duration h: 96

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Daphnia = 1.1 mg/l - Notes: 21 d

c) Bacteria toxicity:

Endpoint: EC50 > 100 mg/l - Duration h: 3

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- d) Terrestrial toxicity:
Endpoint: NOEC > 1000 mg/kg - Notes: 14 d
- e) Plant toxicity:
Endpoint: NOEC > 1000 mg/kg - Notes: 17 d
- 12.2. Persistence and degradability
N.A.
- 12.3. Bioaccumulative potential
N.A.
- 12.4. Mobility in soil
N.A.
- 12.5. Results of PBT and vPvB assessment
vPvB Substances: None - PBT Substances: None
- 12.6. Other adverse effects
None
Not available data on the mixture

SECTION 13: Disposal considerations

- 13.1. Waste treatment methods
Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.
91/156/EEC, 91/689/EEC, 94/62/EC and subsequent amendments.

SECTION 14: Transport information

- 14.1. UN number
Not classified as dangerous in the meaning of transport regulations.
UN Number: ==
- 14.2. UN proper shipping name
N.A.
- 14.3. Transport hazard class(es)
Rail/Road(RID/ADR): no dangerous good
Air (ICAO/IATA): no dangerous good
Sea (IMO/IMDG): no dangerous good
N.A.
- 14.4. Packing group
N.A.
- 14.5. Environmental hazards
Marine pollutant: No
N.A.
- 14.6. Special precautions for user
N.A.
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
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SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) 2015/830
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)

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Regulation (EU) n. 944/2013 (ATP 5 CLP)
Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:
Restrictions related to the product:
Restriction 3
Restrictions related to the substances contained:
No restriction.
Legislative Decree no. 81 of the 9th of April 2008 Title XI "Dangerous substances - Chapter I - Protection against chemical agents"
Directive 2000/39/CE and s.m.i. (Professional threshold limit)
Legislative Decree no. 152 of the 3rd of April 2006 and subsequent modifications and additions. (Environmental regulations)
Directive 105/2003/CE (Seveso III): N.A.
ADR Agreement – IMDG Code – IATA Regulation
Wassergefährdungsklasse (WGK): 1
VOC (2004/42/EC) : N.A. g/l

Provisions related to directive EU 2012/18 (Seveso III):
N.A.
15.2. Chemical safety assessment
No

SECTION 16: Other information

Text of phrases referred to under heading 3:
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
H315 Causes skin irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H412 Harmful to aquatic life with long lasting effects.
H330 Fatal if inhaled.

Paragraphs modified from the previous revision:

SECTION 8: Exposure controls/personal protection
SECTION 11: Toxicological information
SECTION 15: Regulatory information
SECTION 16: Other information

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:

NIOSH - Registry of toxic effects of chemical substances
ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.
This MSDS cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of

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CAS:	Dangerous Goods by Road. Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
LTE:	Long-term exposure.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
OEL:	Substance with a Union workplace exposure limit.
VLE:	Threshold Limiting Value.
WGK:	German Water Hazard Class.
TSCA:	United States Toxic Substances Control Act Inventory
DSL:	DSL - Canadian Domestic Substances List
N.A.:	Not available